RESTRICTION/ELECTION

Restriction/Election

Claims 1, 2, 3, 6, 10, 12, 13, 18, 20, 25 and 30 are pending in this Application. In the Office Action mailed on December 17, 2004, the Examiner requested that Claims 10, 13, 18, 20 and 30 be withdrawn as a result of a restriction requirement.

Applicants hereby withdraw Claims 10, 18 and 20; and amends Claims 13 and 30.

REMARKS/ARGUMENTS

Claims 1, 2, 3, 6, 10, 12, 13, 18, 20, 25 and 30 are pending in this Application. In the Office Action mailed on December 17, 2004, includes the following rejections:

1. Claims 1-3, 6 and 12 are rejected under 35 U.S.C. 102(a) as anticipated by Park et al., J. Electrochem. Society.

2. Claim 25, is rejected under 35 U.S.C. 102(a) as being anticipated by or, in the alternative under 35 U.S.C. 103(a) as being obvious over Park et al., J. Electrochem. Society.

Applicants respectfully address the basis for each of the Examiner's rejections below.

Claim Rejections – Claims 1-3, 6 and 12 are rejected under 35 U.S.C. 102(a)

The Action rejects Claims 1-3, 6 and 12 under 35 U.S.C. 102(b) as anticipated by Park et al., J. Electrochem. Society, which is said to teach:

> an electrode material comprising a surface /chemically modified positive electrode (cathode) material, wherein the modification is ceramic (abstract). It teaches the modification is $Li_xNi_{1-y}Co_yO_2$, when x=1 and y=1 ($LiCoO_2$) (abstract) and the positive electrode material is $LiMn_2O_4$ (abstract). It teaches the modification is $Li_xNi_{1-y}Co_yO_2$ when x=1 and y=1 ($LiCoO_2$) (abstract).

Applicants assert that the Park et al., reference (Park) does not anticipate the present invention. To anticipate a claim, a reference must teach every element of the claim either impliedly or explicitly. See MPEP §2131. As elaborated in *Richardson v. Suzuki Motor Co.*, "[t]he identical invention must be shown in as complete detail as is contained in the claim." 9 U.S.P.Q.2d 1913, 1920(Fed. Cir. 1987). Further, to anticipate a claim, "a reference must disclose every element of the challenged claim and enable one skilled in the art to make the

anticipating subject matter." *PPG Industries, Inc. v. Guardian Industries Corp.*, 75 F.3d 1558, 1566, 37 U.S.P.Q.2d 1618, 1624 (Fed. Cir. 1996). As stated by the Courts in *Akzo N.V. v. ITC*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986) and *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773, 778 (Fed. Cir. 1985), the anticipating prior art reference "must enable one skilled in the art to practice the claimed invention, thus placing the allegedly disclosed matter in the possession of the public."

Park does not anticipate Claims 1-3, 6 and 12 of the present invention because it does not teach every element of the claims either impliedly or explicitly. As explained in Park, the $LiCoO_2$ coating solution was prepared and coated onto the electrode. The present invention is an electrode material including a surface/chemically modified positive electrode (cathode) material, wherein the surface/chemical modification is a ceramic; and not a coating on an electrode.

The specification of the present application (e.g., paragraph [0029]) states that the surface/chemical modified electrode materials are prepared by firing a mixture of electrode material and surface/chemical modifier. Firing temperatures may be in the approximate range of 100°C to about 1000°C. The present invention teaches the firing at elevated temperatures of around 800°C, which leads to a diffusion of the surface modification material into the bulk of the electrode material (chemically modification), while the firing at lower temperatures of around 300°C leads to the presence of a significant amount of the surface modification material on the surface (surface modification) (e.g., paragraph [0045]). Thus the process described in the present invention may broadly be considered as either surface modification or chemical modification or both depending upon the final firing temperature. Park, however, merely discloses an electrode that has a covering or coating of materials over it, not a surface/chemical modified electrode material. Park does not teach every element of the claim either impliedly or explicitly. Therefore, the present invention and the cited reference are different; and thus Park does not anticipate the present invnetion. Applicants respectfully request the Examiner withdraw the rejection under 35 U.S.C. §102(a).

Claim Rejections – Claim 25 is rejected under 35 U.S.C. 102(a)

The Action rejects Claim 25 under 35 U.S.C. 102(b) as anticipated by Park et al., J. Electrochem. Society, which is said to teach an electrode material. The Action states that Park

teaches an electrode material comprising a surface/chemically modified $LiMn_2O_4$ spinel oxide.

Applicants assert that Park does not anticipate the present invention. To anticipate a claim, a reference must teach every element of the claim either impliedly or explicitly. See MPEP §2131. As elaborated in Richardson v. Suzuki Motor Co., "[t]he identical invention must be shown in as complete detail as is contained in the claim." 9 U.S.P.Q.2d 1913, 1920(Fed. Cir. 1987). Further, to anticipate a claim, "a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566, 37 U.S.P.Q.2d 1618, 1624 (Fed. Cir. 1996). As stated by the Courts in Akzo N.V. v. ITC, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986) and Titanium Metals Corp. v. Banner, 227 U.S.P.Q. 773, 778 (Fed. Cir. 1985), the anticipating prior art reference "must enable one skilled in the art to practice the claimed invention, thus placing the allegedly disclosed matter in the possession of the public."

Park does not anticipate Claim 25 of the present invention because it does not teach every element of the claim either impliedly or explicitly; and thus, does not enable one skilled in the art to practice the claimed invention. Park merely discloses an electrode that has a covering or coating of materials over it, not a surface/chemical modified electrode material. Park and the instant invention are different; therefore the reference does not identically disclose Applicants' claimed invention. The electrode material of the present invention includes material that has been chemical modification and surface modification through firing at elevated temperatures that leads to a diffusion of the surface modification material into the bulk of the electrode material, the firing at lower temperatures that leads to the presence of a significant amount of the surface modification material on the surface.

Not only is the process different in making the electrode material, the electrode produced by the process is different. The present invention teaches the firing at elevated temperatures of around 800°C which leads to a diffusion of the surface modification material into the bulk of the electrode material (chemical modification), while firing at lower temperatures of around 300°C leads to the presence of a significant amount of the surface modification material on the surface (surface modification). The reference merely teaches a "coating" of a dry material on the surface, not a surface/chemical modified electrode material. Thus, the present invention is an electrode material including a surface/chemically modified electrode material and not a coated

electrode as in Park.

The cited reference and the instant invention are different; therefore the reference does not identically disclose Applicants' claimed invention. Applicants respectfully request the Examiner withdraw the rejection under 35 U.S.C. §102(a).

Claim Rejections – Claim 25 is rejected alternatively under 35 U.S.C. 103(a)

The Action rejects Claim 25 in the alternative under 35 U.S.C. 103(a) as being obvious in light of Park et al., J. Electrochem. Society, which is said to teach the same product. The Action states that Park teaches an electrode material comprising a surface/chemically modified $LiMn_2O_4$ spinel oxide.

Accordingly, Claim 25 is not rendered obvious by Park, as Claim 25 of the present invention does not teach every element of the claim. A *prima facie* case of obviousness has not been established as the cited references lack support for the teaching of all of the elements of the present invention in all of the rejected claims, lacks a reasonable expectation of success, and lacks the motivation or suggestion to combine the elements. As state above and incorporated herein, the Park reference and the present invention are different. The present invention may broadly be considered as a surface modification and/or chemical modification of electrode materials. Park, however, merely discloses an electrode that has a covering or coating of materials over it, not a surface/chemical modified electrode material. Simply, the Park reference does not teach every element of the claim and cannot render Claim 25 obvious.

Accordingly, Claim 25 is not rendered obvious or anticipated by the Park, et al., reference. Therefore, Applicants respectfully request the Examiner withdraw the rejection under 35 U.S.C. §103(a).

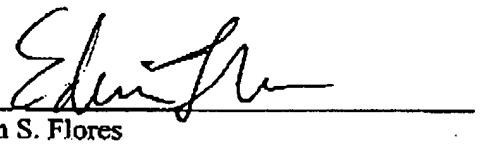
Conclusion

In light of the remarks and arguments presented above, Applicants respectfully submit that the claims in the Application are in condition for allowance. Favorable consideration and allowance of the pending Claims 1, 2, 3, 6, 12, 13, 25 and 30 are therefore respectfully requested.

If the Examiner has any questions or comments, or if further clarification is required, it is requested that the Examiner contact the undersigned at the telephone number listed below.

Dated: March 17, 2005.

Respectfully submitted,



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